

Title (en)  
IMPROVEMENTS RELATING TO OPTICAL FIBRE SENSING SYSTEMS

Publication  
**EP 0266389 B1 19900314 (EN)**

Application  
**EP 87902619 A 19870422**

Priority  
GB 8609732 A 19860422

Abstract (en)  
[origin: WO8706690A1] An optical fibre sensing system for measuring the location and/or magnitude of an external parameter acting at a single point along an optical fibre loop sensor. The system comprises light source means for producing light for propagation in opposite directions around the loop sensor and directional coupler means for coupling the light source means and detector means to the loop sensor and to other optical fibre interfering paths of the system. The detector means are arranged for measuring a phase change (x) between interfering light signals propagating around the sensor loop in opposite directions and for simultaneously measuring a phase change (y) experienced by the light propagating around the loop sensor in one direction. By computation or otherwise, the rate of change of the phase change (x) can be derived and by the use of an algorithm the location and/or magnitude of the applied parameter can be determined.

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**G01D 5/26**

IPC 8 full level  
**G01D 5/353** (2006.01)

CPC (source: EP US)  
**G01D 5/35303** (2013.01 - EP US); **G01M 11/39** (2013.01 - EP US)

Cited by  
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**WO 8706690 A1 19871105**; EP 0266389 A1 19880511; EP 0266389 B1 19900314; GB 8609732 D0 19860529; US 4885462 A 19891205

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**GB 8700265 W 19870422**; EP 87902619 A 19870422; GB 8609732 A 19860422; US 16060188 A 19880216